

ABSTRACT OF THE DISCLOSURE

A method of measuring frequencies of multiple sinusoidal bursts in a signal uses a time-domain window that includes all the bursts which are then transformed to the frequency-domain by an FFT. The magnitudes of the frequency bins are filtered and smoothed to create a minimum magnitude threshold array. An adaptive threshold is calculated from the minimum magnitude threshold array, maximum magnitudes of the frequency bins and an adjustable constant. The magnitudes are then compared to the adaptive threshold and the number of consecutive frequency bins above the adaptive threshold are counted and, if correct for the given signal, a centroid is determined for each frequency bin. If the number of bursts is not correct, then the adjustable constant is altered and the adaptive threshold recalculated. The centroids are converted to measured frequencies for the multiple sinusoidal bursts. The fundamental burst frequencies are measured even in the presence of burst side-lobes, non-linear distortions and noise.